ENVIRONMENTAL FINANCIAL ADVISORY BOARD

May 25, 2006

Honorable Stephen L. Johnson
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW.
Washington, DC 20460

Dear Administrator Johnson:

The Environmental Financial Advisory Board is pleased to submit the enclosed report, "Application of Useful Life Financing to State Revolving Funds," for the Agency's consideration and use. This report supports making extended term financing of environmental facilities available through State Revolving Funds (SRFs).

To the extent that a financing period beyond 20 years is currently authorized by statute, the Board recommends that EPA approve requests by state SRFs for approval of useful life financing up to 40 years. To the extent that an extended financing period is not currently authorized by statute, the Board recommends that EPA be supportive of a statutory amendment specifically authorizing useful life financing up to 40 years.

As discussed in the report "Affordability Rate Design for Households," which we transmitted on February 22, 2006, affordability at the household level is a critical consideration in promoting full cost pricing and meeting the challenge of providing sustainable water and wastewater services. The extended term of useful life financing can result in lower annual debt service. While this benefit accrues at the community level, the resulting reduced rate structures also benefit households, thereby facilitating household affordability. The Board recommends that EPA give full consideration to affordable rate designs when granting approval of state requests for extended financing periods.

The history of extended term financing includes the approval of 30-year clean water fund financings for Massachusetts and New York. In both cases, the EPA approvals were accompanied by specific additional parameters or limitations to ensure compliance with the Clean Water Act and prevent negative impacts on the performance of the State's Clean Water State Revolving Funds (CWFs).

In requesting EPA approval for these leveraged bond purchase programs, both States noted that, in addition to making loans, the Clean Water Act allows SRFs to buy or refinance the debt obligations of municipalities. They further noted that while the loan provisions of the Clean Water Act limit loan financing terms to 20 years, the statutory language of the Clean Water Act covering debt obligation purchases or refinancing does not contain any explicit references to a time limitation. EPA accepted this rationale in approving both the Massachusetts and the New York proposals.

From a financial perspective, the Board sees no reason not to delegate to each state SRF the decision whether to limit its loans to 20 years or to make longer amortization periods available to borrowers. Specifically, we see no financial reason for EPA to impose requirements relating to the pace of recycling.

The Board has previously concluded that the use of extended amortization periods, corresponding to the useful lives of the financed facilities, is a reasonable approach both to making environmental facilities more affordable and to allocation of costs of environmental facilities among various generations of taxpayers or ratepayers that benefit from such facilities. That recommendation is just as applicable to portions of the cost of such facilities that are financed through an SRF as it is to any such costs that are directly financed by a municipality. Also, there is federal precedent for longer-term financing in the context of: (1) CWF loans for disadvantaged communities, which can be amortized over 30 years, and (2) USDA loans, which are authorized to be amortized over 40 years. The general recommendation of the Board would support giving state SRFs the broadest possible flexibility to determine the appropriate amortization period for financed projects, subject to the limitation that the weighted average life of an SRF financing not exceed the weighted average life of the financed projects (as reasonably determined by the borrower).

Subsequent to the last meeting of the Board and the time this report was prepared, EPA Assistant Administrator Benjamin Grumbles issued a Policy Statement on March 17, 2006, which concludes as a matter of policy that the Clean Water Act does allow a State managing the Clean Water SRF to purchase new and pre-existing municipal debt obligations pursuant to Section 603(d)(2) of the Act, and that the plain language of the statute does not impose a 20-year repayment obligation on funds made available pursuant to Section 603(d)(2). This Policy Statement is consistent with the advice of the Board, and we commend Assistant Administrator Grumbles for his initiative and leadership. The Board would be pleased to offer its assistance to the Agency in furthering the objectives of this Policy Statement.

The Board appreciates the continuing opportunity to provide financial advisory assistance to the Agency on issues of national importance.

Sincerely,

A. Stanley Meiburg
Executive Director

Enclosure

cc: Ben Grumbles, Assistant Administrator for Water
Lyons Gray, Chief Financial Officer

EFAB Report

Application of Useful Life Financing to State Revolving Funds

Question

Should the Board recommend to EPA that it be supportive of useful life financing for state revolving funds (SRFs)?

Recommendation

To the extent that a financing period beyond 20 years is currently authorized by statute, the Board recommends that EPA approve requests by state SRFs for approval of useful life financing up to 40 years. To the extent that an extended financing period is not currently authorized by statute, the Board recommends that EPA be supportive of a statutory amendment specifically authorizing useful life financing up to 40 years.

The extended term of useful life financing may benefit small or disadvantaged communities in that they may better manage loan repayment schedules. While these benefits accrue at the community level, the resulting reduced rate structures also benefit households, thereby facilitating household affordability. The Board recommends that EPA give full consideration to affordable rate designs when granting approval of state requests for extended financing periods.

Discussion

Section 1: History of extended term financing for SRFs.

The history of extended term financing includes the approval of 30 year clean water fund financings for Massachusetts and New York. On July 30, 1998, EPA approved a Massachusetts proposal for a leveraged bond purchase program allowing the State's Clean Water State Revolving Fund (CWF) to purchase municipal obligations with repayment periods of up to thirty years. Subsequently, in a letter dated February 9, 2001, EPA approved the New York CWF's proposal for an extended financing program changing the New York CWF program to include a leveraged bond program providing for the purchase of debt obligations with terms of up to thirty years. In both cases, the EPA approvals were accompanied by specific additional parameters or limitations (which were different in each case) to ensure compliance with the Clean Water Act and prevent negative impacts on the performance of the CWFs. Attached for reference and more detailed review are copies of the approval letters.

In requesting EPA approval for these leveraged bond purchase programs, both States noted that (in addition to making loans) the Clean Water Act allows SRFs to buy or refinance the debt obligations of municipalities. They further noted that while the loan provisions of the Clean Water Act limit loan financing terms to twenty years, the statutory language in Section 603(d)(2) of the Clean Water Act covering debt obligation purchases or refinancing does not contain any explicit references to a time limitation. EPA accepted this rationale in approving both the Massachusetts and the New York proposals.

Section 2: Analysis of financial considerations supporting 20 year SRF financing and useful life financing

<u>General Principles Regarding SRF Financial Assistance</u>

There are two basic SRF program structures: direct loan programs and leveraged loan programs. In a direct loan program, borrower loans are made entirely from program equity and an interest

subsidy to the borrower is provided by charging a below market rate on the loan. Under a leveraged loan program, the borrower loan is funded in whole or in part from bond proceeds:

- Under the cash flow approach, borrower loans are funded in part from bond proceeds and in part from equity. The subsidy is provided by charging a below market rate on the portion of the loan funded with equity.
- Under the reserve fund approach, borrower loans are funded entirely with bond proceeds and a subsidy is provided by using equity to fund a reserve fund (which can be invested at up to the bond interest rate) and using the earnings thereon to pay a portion of the bond interest. The borrower pays only the net bond interest.

Direct loan programs can only fully use their capacity to provide financial assistance by giving 0% loans. A direct loan rate of greater than 0% results in equity growth at the expense of current borrowers who receive less financial assistance than the SRF could provide. A direct loan approach minimizes the amount of loans that can be given at a specific subsidy level. The amount of loans can not exceed the amount of program equity.

Leveraged loan programs enable SRFs to maximize the amount of financial assistance provided to borrowers by fully using all earnings on equity. For any specific interest subsidy, the leveraged approach also enables an SRF to maximize the amount of subsidized loans that it provides.

The benefit of an interest subsidy on a loan is maximized if the loan interest rate is 0%. Under a direct loan program, this occurs if equity is used to make 0% loans. Under a leveraged loan program, this occurs if (i) loans are funded from bond proceeds, (ii) program equity equal to the bonds is used to fund a reserve fund, and (iii) the reserve earnings are used to pay the bond interest. Consequently, the maximum dollar amount of financial assistance that can be provided to borrowers from an SRF is the market interest rate at which the borrowers could directly access the market times the total amount of equity in the SRF. So, if the borrowers acting on their own could borrow at 4% and the SRF has $100 million of equity, the maximum amount of financial assistance is $4 million per annum.

If the amount of equity remains constant, the capacity to provide assistance will remain constant also. That is true, even as loans are repaid and equity is recycled into new loans. Additional capacity to provide assistance comes only from more capitalization grants and state match or from retained earnings.

Retained earnings accrue only if an SRF provides less financial assistance today than it has economic capacity to provide:

- For a direct loan program by making direct loans at a rate greater than 0% or
- For a leveraged loan program by providing interest subsidies that are less than the earnings on program equity. For a cash flow program this occurs if interest on the portion of the loan made from equity exceeds the interest subsidy on the portion of the loan made from bond proceeds. For a reserve fund program, this occurs if the reserve fund is larger than that necessary to fund the loan subsidy.
- In all cases, retained earnings also accrue between the time equity is received or repaid, and the time it is used to make new loans. While, from an economic perspective, these earnings

could be used to provide financial assistance, for administrative reasons, the SRFs are unable to make loans fast enough to immediately utilize this capacity.

Recycling of equity does not change the capacity of an SRF give financial assistance. It simply allocates the assistance that is provided to a new subgroup of borrowers (who are selected from the same universe of potential borrowers within each state). In fact, it is possible for the same borrowers to receive the same amount of assistance as before the funds are recycled. A borrower for whom that is likely to happen over time is the New York Water Municipal Finance Authority, which receives approximately 60% of the financial assistance provided by the New York State Environmental Facilities Corporation.

Any appearance that recycling results in growth in equity is due to the fact that while equity is invested pending being recycled; an SRF's capacity to provide financial assistance is being underutilized. Thus, retained earnings are being generated. Consequently, in a true economic sense, the pace of recycling does not have any impact on the financial capacity of an SRF to provide financial assistance. Note that we could always drastically increase retained earnings by simply investing equity rather than using it to make loans. This is, in effect, what is accomplished by insisting on a higher pace of recycling.

However, a higher pace of recycling results in a higher underutilization of an SRFs capacity to provide financial assistance since, upon each instance of recycling, there is a significant period of time before the recycled amounts are re-loaned to borrowers. Accordingly, more earnings on equity (which might otherwise have been used to provide financial assistance to borrowers) are retained by the SRF. Correspondingly, a lower pace of recycling does not result in lower earnings, it simply results in a larger portion of an SRFs earnings being deployed to provide financial assistance today, rather than to increase future capacity. A higher pace of recycling also results in higher administrative costs at each of the federal, state and local levels, since it requires more loans to be processed.

Analysis of Alternative SRF Structures

Consider the following alternative SRF structures, assuming in each case that: the market loan rate is 4%; the subsidized loan rate is 2%; the SRF has $100 million of equity; equity is invested at 4% while in a Debt Service Reserve Fund and at 3% while waiting to be recycled; all loans are structured as level principal; and equity being recycled is invested for 1 year before being used to make new loans:

- 20 year direct loan – loan capacity from original equity is $100 million (and does not change as loan principal is recycled); the 2% loan earnings are retained and result in equity growth; while funds are waiting to be recycled, 3% in retained earnings are generated
- 40 year direct loan – loan capacity from original equity is $100 million (and does not change as loan principal is recycled); the 2% loan earnings are retained and result in equity growth; while funds are waiting to be recycled, 3% in retained earnings are generated; because the pace of recycling is slower than with 20 year loans, (1) on average, a higher percentage of the equity is deployed to provide financial assistance, and (2) as a result, retained earnings are reduced.
- 20 year leveraged loan – loan capacity is $200 million; except during recycling, earnings on equity are fully deployed to provide financial assistance; so equity growth comes only from

the 3% earnings while equity is waiting to be recycled, which are identical to the earnings resulting from recycling in the 20 year direct loan example

- 40 year leveraged loan – loan capacity is $200 million; except during recycling, earnings on equity are fully deployed to provide financial assistance; so equity growth comes only from the 3% earnings while equity is waiting to be recycled, which are identical to the earnings resulting from recycling in the 40 year direct loan example; because the pace of recycling is slower than in either 20 year scenario, (1) on average, a higher percentage of the equity is deployed to provide financial assistance, and (2) as a result, retained earnings are reduced compared to the 20 year alternatives.

From the perspective of a state SRF, the substantive difference between direct loans and leveraged loans is that, in the direct loan case, the SRF is providing only half of the financial assistance that it could provide today. Instead of maximizing the financial assistance that it provides today, the SRF is accumulating earnings that can be used to provide an increased amount of financial assistance in the future. In the leveraged loan example, the SRF is fully utilizing its capacity to provide financial assistance today, and its capacity to provide financial assistance in the future will be the same as it is today.

From the perspective of a borrower, there is a significant difference in annual debt service for various amortization periods. For the purpose of this analysis, the comparison is of level annual debt service using different amortization periods. The annual debt service on a 20 year loan at 2% is 67% higher than the annual debt service on a 40 year loan at 2% and is 36% higher than the annual debt service an a 30 year loan at 2%. The annual debt service on a 30 year loan at 2% is 22% higher than the annual debt service on a 40 year loan at 2%. For borrowers that would normally amortize their bonds over a 30 year period, the requirement to use a 20 year amortization period for SRF loans will reduce (and, under certain market conditions, fully offset) the annual debt service savings achieve with a subsidized SRF loan.

State SRFs Are Generally Given Discretion How to Allocate Their Financial Assistance

Each SRF is permitted by EPA to exercise its own discretion as to whether:

- To provide the maximum potential amount of financial assistance to current borrowers (in which case, the SRF's equity and its capacity to provide financial assistance will remain constant); or
- To make only a portion of its capacity to provide financial assistance available to current borrowers (which results in equity growth and increases the capacity to provide financial assistance in the future).

Each SRF is also permitted by EPA to exercise its own discretion concerning how broadly (i.e., over how many borrowers) it spreads the financial assistance that it currently provides. A direct loan approach minimizes the dollar amount of loans that can be made (and therefore the number of borrowers). A leveraged loan approach can be used to maximize the dollar amount of loans (and therefore the number of borrowers).

Conclusion

From a financial perspective, we see no reason not to delegate to each state SRF the decision whether to limit its loans to 20 years or to make longer amortization periods available to

borrowers. Specifically, we see no financial reason for EPA to impose requirements relating to the pace of recycling.

Under general EPA policy, each state retains discretion concerning (I) what portion of its capacity to provide financial assistance it uses currently and what portion is used to grow equity by generating retained earnings and (II) to determine the amount of projects that receive financial assistance. Given the general policy, there is no sound financial reason for using the pace of recycling to (A) limit the portion of an SRF's capacity that can be used to provide financial assistance currently or (B) to increase the amount of projects that receive financial assistance.

Section 3. Description of New York State Environmental Facilities Corporation (NYSEFC) proposed amendments to its Finance Plan to permit 30-year clean water fund loans and the policy rationale therefore.

The proposal provided by NYSEFC in seeking approval from EPA of 30-year financing, and the policy rationale therefore, provide further context for consideration of the merits of permitting useful life financing for SRFs.

(A) NYSEFC proposal:

"In addition to using capital in the SRF to make loans as authorized under Section 603 (d) (1) and as a source of revenue or security for the payment of principal and interest on revenue bonds, proceeds of which are deposited in the fund (Section (d) (4)), New York State is proposing to offer its local government units a Leveraged Bond Purchase Program as authorized under Section 603 (d) (2) of the Clean Water Act. Leveraged bond purchases will be funded in the same manner as leveraged loans: with the proceeds of revenue bonds secured and issued with bonds issued to finance leveraged loans. Municipal bonds will be purchased pursuant to a Project Finance Agreement. Purchased obligations will be either general obligation bonds or special revenue bonds secured by specific revenue or appropriation pledges.

Principal and interest payments on purchased obligations must commence within one year of project completion and the obligations must be fully amortized within a period not exceeding 30 years of project completion or the useful life of the project financed, whichever is less. For purposes of this amendment, useful life shall be as defined by New York State General or Local Finance Law, as applicable. Purchased obligations will otherwise conform to the requirements of Section 603 (d) (1) of the Clean Water Act. Specifically, the purchased obligations shall [pay] interest at or below market interest rates (Section 603 (d) (1) (C)) and the CWSRF shall be credited with all payments of principal and interest made on the purchased obligations."

(B) Description of NYSEFC policy rationale:

"The addition of leveraged bond purchasing to the mix of products offered by the New York State CWSRF remedies a major flaw in the existing Program. The flaw that has existed related to the disconnect between loan terms and useful life of CWSRF eligible projects. Although local governments that participate in the Program realize substantial financial benefits, in the form of real or implied interest rate subsidies, when compared to gross debt service or prevailing market rates, the program in its current form does not allow participants to distribute capital costs over the life of a project where such projects have useful lives of greater than 20 years. New York State Local Finance Law permits local governments to amortize debt obligations over the useful life of projects financed. Consequently, the existing 20 year limitation on CWSRF loans presents New York State local governments with an unnecessary dilemma: (1) spread debt amortization

over the useful life of the project, as prescribed by New York State law, with market rate obligations and forgo CWSRF benefits, or (2) limit amortization to the first 20 years and capture the subsidy benefit…."

Section 4. <u>The Board has generally endorsed the concept of useful life financing</u>

The Board has previously concluded that the use of extended amortization periods, corresponding to the useful lives of the financed facilities, is a reasonable approach both to making environmental facilities more affordable and to allocation of costs of environmental facilities among various generations of taxpayers or ratepayers that benefit from such facilities. That recommendation is just as applicable to portions of the cost of such facilities that are financed through an SRF as it is to any such costs that are directly financed by a municipality. Also, there is federal precedent for longer-term financing in the context of: (1) CWF loans for disadvantaged communities, which can be amortized over 30 years and (2) USDA loans, which are authorized to be amortized over 40 years. The general recommendation of the board would support giving state SRFs the broadest possible flexibility to determine the appropriate amortization period for financed projects, subject to the limitation that the weighted average life of an SRF financing not exceed the weighted average life of the financed projects (as reasonably determined by the borrower).